Ham-Homebrew Digest   Wed, 10 Aug 94   Volume 94 : Issue 229

Today's Topics:
                             cell sites
               Cyprus (ic Designs) Pll Chip, No External
                   DSP for the HomeBrewer?? (part2)
              Freq standard from TV Colorburst subcarrier
                          Handbook (2 msgs)
                   Handheld and Saltwater... (2 msgs)
                     HF preamp circuit - CORRECTION
       Need some help with the design of an Operational Amplifier
                          Need TCM3105 ic
                  New Life For Old FM Rigs (2 msgs)
                        Ocean State Electronics

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
----

yctcsl@cerfnet.com wrote:

: Does anyone have any info regarding the rate paid by PacBell (AirTouch) for
: establishing a cell site lease. The offers been made however I'd be interested
to
: find out just what being paid these days.

I'd negotiate for a phone or two with free airtime as part of the deal.
Brian

Robert, I saw your note on pll chip on our local bbs, I would
be interested in hearing if you have any luck with it. I've dabled with
a few pll chips in the past. Having all the "stuff" done by the chip
sounds great!
Good luck and 73.
Tim Cadigan, wc1f
Timothy.Cadigan@f239.n109.z1.fidonet.org

Fidonet: Timothy Cadigan 1:109/239
Internet: Timothy.Cadigan@f239.n109.z1.fidonet.org

In article <ahall-0808941758330001@ruger-68.slip.uiuc.edu> ahall@ux4.cso.uiuc.edu
(Allen Hall) writes:
>Hello again everyone,
>
>This is kinda an update to the question I first posed about homebrew DSP.
>I have since my last posting recieved the chip that I had new was coming,
>and I have some information that might help anyone who wants to make
>suggestions to me.
>...
>-Please send me your suggestions on articles/books/ftpsites for any
>information, or programs related to DSP.

One book I've found particularly helpful is "Digital Signal Processing
in Basic" published by Butterworth (!) and written by G.B. Lockhart
and B.M.G. Cheetham.
It covers Fourier transforms, filtering, and other things; it has
both the math and the algorithms. An excellent introduction.

-- Bruce KN6MN

Date: Tue, 09 Aug 1994 10:28
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!
nntp.cs.ubc.ca!unixg.ubc.ca!news.mic.ucla.edu!MVS.OAC.UCLA.EDU!
OSYSMAS@network.ucsd.edu
Subject: Freq standard from TV Colorburst subcarrier
To: ham-homebrew@ucsd.edu

>Why would you want to use a TV station when there is WWV for free, and
>it's more accurate??

You have it backwards -- the color carrier (when it worked), was
more accurate. They were both based on atomic standards and the
TV signal since it is local and VHF would have less noise than a
HF WWV signal.

Now however, with the widespread use of digital frame synchronizers
you can no longer count on the color carrier being better than a
normal crystal oscillator, with the possible exceptions of a few TV
stations located at network sites (Los Angeles, New York?).

Look into GPS (satellite microwave spread spectrum), LORAN-C (100
Khz pulse), or WWVB (60 Khz).

>long wave on, I think it's 60KHz. Or if you're worried about the
>atmospheric interference, there is also a way to call the NIST over land
>line.

And get variable phone line delays as well as freqency shifts..

Date: 9 AUG 94 10:35:41
From: pa.dec.com!mrnews.mro.dec.com!est.enet.dec.com!randolph@decwrl.dec.com
Subject: Handbook
To: ham-homebrew@ucsd.edu

In article <1994Aug8.235954.21300@knight.vf.ge.com>, hbrown@nadir.resd (Harry H.
Brown) writes...
>Tom, I can provide info on a 3 band solid state linear amp covering 6, 2 and
>222 MHz and everything in between.
>   ...
>Harry, W3IIT

I wasn't so much looking for a project as lamenting the fact that no such is in

the Handbook. It sounds great, though! Exactly the kind of project a lot of
hams could use.

I'd like to see less 1000W dummy loads and 2000W forced-air cooled amplifiers,
and more 5W in, 50W out 2m amps, and easy to build test equipment to make sure
your project is up to standards (some of that in there already). Also, some
simple transistor rigs for the fun but little-used modes. The 6m CW/SSB rig in
"Solid State Design" is a good example. Also like to see enough design info
presented that the projects can be understood and adapted to other needs - the
Handbook is already pretty good about the level of math included, just need
more of it where appropriate.

BTW, I have all the parts for that 2m amp in the '76 handbook - you can still
get them. I'm gonna try putting it together soon.
-Tom R.   N1OOQ   randolph@est.enet.dec.com

Date: 8 Aug 94 18:46:34 -0800
From: ihnp4.ucsd.edu!galaxy.ucr.edu!library.ucla.edu!csulb.edu!nic-nac.CSU.net!
vax.sonoma.edu!harrisok@network.ucsd.edu
Subject: Handbook
To: ham-homebrew@ucsd.edu

In article <1994Aug9.002019.21584@knight.vf.ge.com>, hbrown@nadir.resd (Harry H.
Brown) writes:
>
> Tom,
> I'm new to this and I think I may have screwed up the reply to the question
> on dolif state amplifiers. In any case whoever is interested, the 6 meter,
> 2 meter, and 222 MHz broadband amplifier has around 120 watts output linear.
>
> 73,
> Harry, W3IIT

Hi Harry... I'd be interested in info regarding this. I tried to send you
email but it was returned. Please email me.

73,
Ken
--
```
      ---------------------------------------------------------------------
      | Ken Harrison       |          I once thought I was wrong...     |
      | N6MHG              |                                            |
      | harrisok@sonoma.edu |              ...but I was mistaken.       |
      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
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Date: Mon, 8 Aug 1994 22:06:00 GMT
From: newsflash.concordia.ca!pavo.concordia.ca!md_hill@uunet.uu.net
Subject: Handheld and Saltwater...
To: ham-homebrew@ucsd.edu

In article <325rma$1g6@bigboote.WPI.EDU>, jmhill@duck.WPI.EDU (Jonathan M Hill)
writes...
>Hello all;
>   This is the first place I could think of to post just such a note, if
>anyone can suggest another place I'd appreciate the pointer.
>
>   Here is the problem I'm facing, I have a friend who managed to dip a
>marine band handheld radio into the ocean for a short moment. Although the
>moment was short, the radio was not immediately rinsed with fresh water,
>thus some corrosion of parts must have taken place.
>
>   I'd appreciate some advice, what kind of nasty business can saltwater
>do to a radio? Anyone ever manage to dip a radio and manage to fix it
>afterwards? The owner of this particular radio went back to the point of
>sale, the sales person said in appoximate terms, "the radio is done for...."
>
>   The radio is a Realistic MTX-120 VHF Marine Transceiver. The model
>number is 19-1050, and serial number 05001434. I'd apprciate any pointers
>to where I can find schematics, parts lists, allignment proceedures, but
>especially troubleshooting and testing guidelines. I do have access to
>suitable lab test gear.
>
>   I'm just starting my adventure, so advice is welcomed. I noticed the
>Uniden logo inside the radio cabinet. Thus, the radio must have been
>manufactured for Realistic by Uniden.
>
>   Thanks;
>
Water damaged equipment is often repairable. The most important thing is NOT TO
TURN IT ON until you have had a chance to do the following:

Open the radio. Take an old toothbrush and scrub the boards *carefuly* under
luke-warm running water. In extreme cases, you might have to use a mild
detergent (be careful that it doesn't eat anything). Of course, avoid getting
water into anything like transformers etc.

If there are components that are obviously too far gone, you will have to
replace them; although if it was just a quick dunk, you are probably alright.
Next, put the thing (minus the case) into the oven at about 60 deg. C and
leave it for several hours. When it is cool, reassemble the unit but hook up
a variable power supply in place of the batteries. Slowly bring up the voltage
to the rated nominal voltage. NOW turn it on. If you were careful, meticulous,

and somewhat lucky, the radio will be fine.

Good luck

73 de VE2HVW

Date: 8 Aug 1994 17:57:30 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!agate!cat.cis.Brown.EDU!noc.near.net!
bigboote.WPI.EDU!duck!jmhill@network.ucsd.edu
Subject: Handheld and Saltwater...
To: ham-homebrew@ucsd.edu

Hello all;
     This is the first place I could think of to post just such a note, if
anyone can suggest another place I'd appreciate the pointer.

     Here is the problem I'm facing, I have a friend who managed to dip a
marine band handheld radio into the ocean for a short moment. Although the
moment was short, the radio was not immediately rinsed with fresh water,
thus some corrosion of parts must have taken place.

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do to a radio? Anyone ever manage to dip a radio and manage to fix it
afterwards? The owner of this particular radio went back to the point of
sale, the sales person said in appoximate terms, "the radio is done for...."

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suitable lab test gear.

     I'm just starting my adventure, so advice is welcomed. I noticed the
Uniden logo inside the radio cabinet. Thus, the radio must have been
manufactured for Realistic by Uniden.

                                        Thanks;
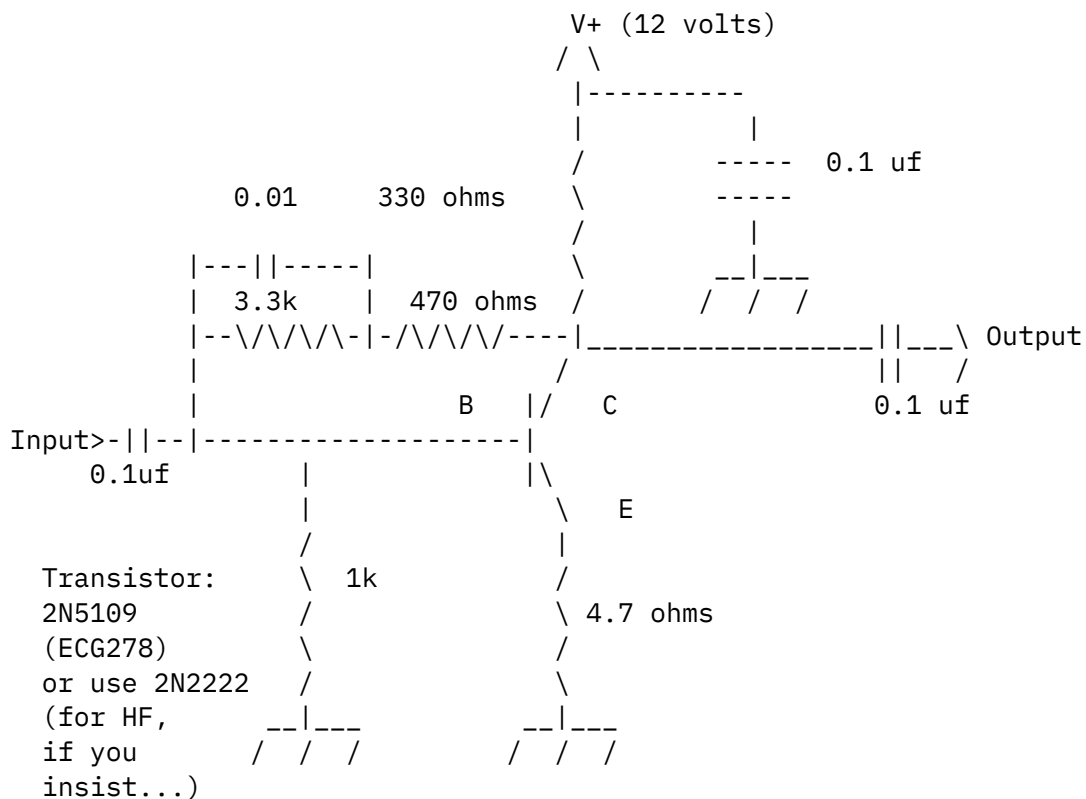   Jonathan Hill/N1QOL

Date: 9 Aug 94 16:19:47 GMT
From: news-mail-gateway@ucsd.edu
Subject: HF preamp circuit - CORRECTION
To: ham-homebrew@ucsd.edu

ACK!!!

I forgot a resistor on the ubiquitous amplifier...

Here it is (sigh...) again, less-incorrect...

****

```
                                  V+ (12 volts)
                                 / \
                                  |----------
                                  |          |
                                 /        ----- 0.1 uf
            0.01      330 ohms   \        -----
                                 /          |
           |---||-----|          \        __|___
           |  3.3k    |  470 ohms /      /  /  /
           |--\/\/\/\-|-/\/\/\/----|_____||___\ Output
           |                     /                  ||   /
           |              B   |/   C                0.1 uf
  Input>-||--|-------------------|
     0.1uf          |           |\
                    |             \  E
                   /              |
  Transistor:      \  1k          /
  2N5109           /              \ 4.7 ohms
  (ECG278)         \              /
  or use 2N2222    /              \
  (for HF,       __|___          __|___
  if you        /  /  /          /  /  /
  insist...)
```

Note the 1k resistor to ground. It's kinda important, actually...

<Clint>

Internet: clint@uugate.aim.utah.edu
Amprnet: ka7oei@uugate.wa7slg.ampr.org

Date: 9 Aug 94 00:16:57 CDT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!

vixen.cso.uiuc.edu!newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!kuhub.cc.ukans.edu!
christos@network.ucsd.edu
Subject: Need some help with the design of an Operational Amplifier
To: ham-homebrew@ucsd.edu

hello there,

    I have a question concerning design of a simple amplifier using
operational amplifiers. I am simply designing a noninverting amplifier with a
gain of 2, that is R1=R2 (Closed Loop Gain=(1+R2/R1)). No matter what I apply
to the input of the amp the output always saturates to -11 Volts. Even if no
input is applied the output still gives a -11V.
The voltages that I am applying to the Vcc+ and Vcc- of the op amp are +12V and
-12V respectively. I am using the LM 741 opamp for this application.

    Does anybody in this group happen to know what the problem might be?

    I would appreciate any relevant response.

Please e-mail.

Thanks in advance

Chris

Date: 10 Aug 94 01:30:43 GMT
From: news-mail-gateway@ucsd.edu
Subject: Need TCM3105 ic
To: ham-homebrew@ucsd.edu

I need a TCM3105 chip. This is a 16-pin 1200 bps half-duplex modem chip
made by Texas Instruments. I need it to build the Poor Man's Packet
interface. Does anyone know where this is available in single quantities?

--
-=-
ai351@leo.nmc.edu   David Brodbeck
      Amateur packet (AX.25): N8SRE@wb4vva.#nemi.mi.usa.na
-=-

Date: 8 Aug 94 19:25:49 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!usc!elroy.jpl.nasa.gov!netline-

Subject: New Life For Old FM Rigs
To: ham-homebrew@ucsd.edu

In article 7s7@netcom.com, btoback@netcom.com (Bruce Toback) writes:
>In article <gregCu2GK4.JGv@netcom.com> greg@netcom.com (Greg Bullough) writes:
>>
>>It's a shame to retire my Drake UV-3 to packet service, now that virtually
>>every local repeater requires PL tones.
>>
>>So I've been thinking about setting up an outboard sub-audible and DTMF
>>encoder. Now the encoder and the DTMF pad are easy to obtain. However,
>>most of the encoders seem to want a 5-bit encoding of values from 0-31
>>to select the sub-audible tones.
>
>Communication Specialists has an encoder that can be programmed with
>a 31-position switch. You could also use a pair of hexadecimal thumbwheel
>switches with a little translation table, or an EPROM with a switch that
>contains just the PL frequencies you need. How much room do you have
>for the controls? Is there enough room for hex switches, a rotary switch,
>or whatever?

How about using an 87xx series microcontroller and its timer output to generate
a programmable frequency square wave?

 Peter Simpson, KA1AXY   Peter_Simpson@3com.com
 3Com Corporation   (508) 836-1719 voice
 Northborough, MA 01532   (508) 393-6934 fax

 I speak only for myself, 3Com doesn't pay me to speak for them, so I don't.

Date: 5 Aug 94 14:36:03 GMT
From: netcomsv!netcom.com!greg@decwrl.dec.com
Subject: New Life For Old FM Rigs
To: ham-homebrew@ucsd.edu

It's a shame to retire my Drake UV-3 to packet service, now that virtually
every local repeater requires PL tones.

So I've been thinking about setting up an outboard sub-audible and DTMF
encoder. Now the encoder and the DTMF pad are easy to obtain. However,
most of the encoders seem to want a 5-bit encoding of values from 0-31

to select the sub-audible tones.

The control circuits seem like a significant challenge. Does anyone
know of a construction article or a kit for a sub-audible encoder
with a human interface which is better than a row of dip switches?

Greg

Date: 10 Aug 94 01:22:03 GMT
From: news-mail-gateway@ucsd.edu
Subject: Ocean State Electronics
To: ham-homebrew@ucsd.edu

Is Ocean State Electronics out of business? I haven't gotten a catalog
from them in ages, and there's no answer at their 800 number.

--
-=-
ai351@leo.nmc.edu   David Brodbeck
      Amateur packet (AX.25):   N8SRE@wb4vva.#nemi.mi.usa.na
-=-

Date: 9 Aug 1994 01:11:34 GMT
From: nntp.crl.com!jeffj@decwrl.dec.com
To: ham-homebrew@ucsd.edu

References <7AUG199413272479@pavo.concordia.ca>, <776304324snz@arkas.demon.co.uk>,
<8AUG199416550806@pavo.concordia.ca>cam.
Subject : Re: NEC simulation software

HILLIER, MARK D. (md_hill@pavo.concordia.ca) wrote:
: >
: >I did this, and was told by the machine that it was no longer anonymous ftp,
: >and to go to ftp.netcom.com. This I also did; but, couldn't find any
: >evidence of NEC files - there are literally zillions of directories under /pub,
: >and nothing appeared obvious. Do you know if the anonymous ftp site still
: >carries the NEC files, and if so, what directory path should I use to point me
: >in the general direction of the ballpark?

Look in a directory called randall, randal, rander something like that.
Sorry this from memory and after a rough weekend is the best I can do
right now.

Jeff

--
jeffj@crl.com | If work for a living and think the Republican party is your
AB6MB | friend. Ask Republican congressmen if they ever would side
              | with labor over business. Then watch them laugh in your face!

End of Ham-Homebrew Digest V94 #229
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